



Attorney's Docket No.: 41653-002001

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Arthur D. Taylor  
Serial No. : 09/943,987  
Filed : August 31, 2001  
Title : 22K GOLD ALLOY COMPOSITIONS

Art Unit : 1742  
Examiner : Harry D. Wilkins III

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**Mail Stop Appeal Brief - Patents**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

BRIEF ON APPEAL

**(1) Real Party in Interest**

W. R. Cobb Company is the owner of this patent application by an assignment from the inventor recorded at reel 012281, frame 0289, and it is the real party in interest.

**(2) Related Appeals and Interferences**

There are no related appeals or interferences.

**(3) Status of Claims**

Claims 1-12 are pending and each of those claims was finally rejected in the office action dated September 25, 2003.

**(4) Status of Amendments**

Applicants have not amended the claims after they were finally rejected in the office action dated September 25, 2003.

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**(5) Summary of Invention**

Claims 1-4 and 7-8 feature a 22k gold alloy composition with specified amounts of silver, cobalt and copper; boron is optional. The composition is hard enough to be worked in ways that are not typically feasible for 22k gold, for example to make a stamping, a wire or a sheet.

Specifically, claim 1 reads,

1. *A 22K gold alloy comprising, by weight:*

*silver: 2-6%*

*cobalt: 0.1 to 2%*

*optionally boron up to 0.5%*

*copper: 0.33% - 8.40%.*

Claims 5 and 9-12 specify a master alloy of cobalt, boron (optional), and copper which can be combined with gold to produce the 22k gold alloy of claim 1; claim 6 specifies a method of making the 22k gold alloy composition by combining the master alloy with gold.

Dependent claim 7 specifies that the alloy is a stamping, a wire or a sheet.

**(6) Issues**

The following issues are presented:

- a) Are claims 1-12 anticipated by Diamond, U.S. 5,384,089?
- b) Is claim 7 anticipated by Diamond 5,384,089?
- c) Are claims 1-12 obvious in view of Diamond, U.S. 5,384,089?
- d) Is claim 7 obvious in view of Diamond 5,384,089?

**(7) Grouping of Claims**

There are two distinct sets of claims.

- I. Claims 1-6 and 8-12 generally featuring 22k gold alloys or master alloys for making them.
- II. Claim 7 featuring 22k gold alloys in the form of a stamping, wire or sheet.

Claims 1-6 and 8-12 stand or fall together. Claim 7 is patentable even if the other claims are not.

**(8) Argument**

Although the Examiner treats the anticipation and obviousness arguments together, those rejections require different analyses, and Applicants divide this portion of the brief into two sections.

**ANTICIPATION**

**I. Claims 1-12**

The Examiner rejects all claims (including claim 1) as anticipated under 35 U.S.C. §102(b) because,

**“The ranges of composition disclosed by Diamond overlap the presently claimed ranges.”**

For purposes of the anticipation analysis, it is important to review Diamond's disclosure as a whole. The Diamond specification (particularly the examples in that specification) and claims 1-5 of Diamond disclose specific gold alloys that have much lower gold content and have nothing to do with Applicant's claimed 22k gold alloys. The Examiner relies on the fact that in two locations (2:16 and in claim 6) Diamond says that his invention is broad enough to cover a range of gold alloys that encompasses 22k gold. From there, the Examiner goes on to select not only one specific gold content but also values of other elements, thus creating an example of an alloy that meets all the claim limitations but that is **not disclosed in the reference**. It is clear that the specific examples in Diamond do not come close to any of several basic values required in claim 1 (particularly the gold value), and the Examiner does not argue otherwise. What then is the significance of Diamond's expression of a desire to cover a broad range of alloys?

Before analyzing the facts in greater detail, we need to discuss the proper standard to be applied to those facts where, as here, the specific examples in the reference do not anticipate the claims, but the reference includes broader ranges that overlap in some way with the claims. The rejection **erroneously** assumes that overlap by itself constitutes anticipation.

The standard the Examiner relies on to support anticipation is legally incorrect. A prior reference that discloses ranges overlapping a later reference does not automatically anticipate the later reference. The MPEP provides the analytical framework for evaluating the art in this situation (see MPEP §2131.03, emphasis added):

When the prior art discloses a range which touches, overlaps or is within the claimed range, but no specific examples falling within the claimed range are disclosed, **a case by case determination must be made** as to anticipation. In order to anticipate the claims, the claimed subject matter must be disclosed in the reference with "sufficient specificity to constitute an anticipation under the statute". Emphasis is ours.

The **case-by-case determination** involves a judgment about whether the reference teaches a broad range while the claims are directed to a narrow range. If so, there is no anticipation.

The CAFC case law provides guidance in this evaluation. *Minnesota Mining and Manufacturing Co. v. Johnson & Johnson Orthopedics*, 24 U.S.P.Q.2d 1321 (1992) ("3M v. J&J"). The claim at issue in 3M v. J&J required a fiberglass fabric having a thickness of 0.020 to 0.45 inch and a mesh size of 20 to 200 openings per square inch. These parameters provided beneficial properties to casts made from the fiberglass fabric. *Id.* at 1325-26, 1332. The prior art reference ["Straube"] disclosed fiberglass and permitted extrapolation of a thickness range of .0003 to 0.03 inch and a mesh size of 25 to 2500 openings per square inch. The Federal Circuit found that the prior art reference was **not an anticipation even though the claimed ranges were a subset of those taught in the prior art** (24 U.S.P.Q.2d at 1332; emphasis added):

The ... ranges ... extrapolated from Straube [the prior art reference] are "so broad as to be meaningless to one skilled in the art." The Straube patent provides no guidance as to how to construct a fiberglass cast with the beneficial properties achieved by the [patented] invention; strength, porosity, lightness, and ability to cure quickly. ...[A]lthough [the patent] claims are subsumed in Straube's generalized disclosure of knit fiberglass as a substrate, this is not literal identity.

\* \* \*

In order to anticipate, the Straube patent **must** sufficiently describe the claimed invention to **have placed the public in possession** of it. The record establishes that the Straube patent does not do this. Emphasis is ours.

In sum, the Federal Circuit and the MPEP are very clear that, in the situation we have here, one must review the breadth of the ranges in the prior art and compare that breadth to the breadth of the claimed range. What is the result when we apply that standard to the claims at issue?

Below we compare the broad Diamond ranges with the claims in the table below.

| <u>Element</u> | <u>Claim 1</u> | <u>Diamond Broad Statement<br/>(e.g. claim 6)</u> |
|----------------|----------------|---|
| Gold           | 22k (91.67%)   | 33.3-92%  |
| Silver         | 2.0-6.0%       | 2.0-22%   |
| Cobalt         | 0.1-2.0%       | 0-2.0%  |
| Copper         | 0.33-8.4%      | 2.0-47.33%  |
| Boron          | 0-0.5%         | 0%  |

From the table it is clear that one skilled in the art would have to **make several selections** from the broad disclosure in Diamond to arrive at an alloy within the limits of claim 1. First, one would have to select the a value just below top of Diamond's gold range. Second, one would have to select a value toward the bottom of Diamond's copper range. Third, one would have to select the bottom of Diamond's silver range. So the examiner has made not one but three specific selections, picking and choosing from the general description of weight ranges in Diamond to create an alloy that falls within the claims.

The problem is, the alloy the examiner constructs is one that Diamond does not disclose. In *3M v. J&J*, the percentage overlap of the prior art range for openings/in<sup>2</sup> and the range required by the claim was not trivial  $[(9200-20)/(2500-25) = \text{over } 7\%]$ . Note by way of comparison that the claims in this case are limited to a specific gold value, one in which Diamond has no particular interest and about which he provides no specific examples at all. Moreover, in this case, there are selections to be made for each of three ranges detailed above. To find anticipation, the examiner must conclude that each range is anticipated, **cumulatively**. Simply making one or two of the selections would not produced an alloy within Applicant's claim 1. Furthermore, as in *3M v. J&J*, the prior art relied upon here by the Examiner provides absolutely no guidance concerning how to make a product having the beneficial properties achieved when operating within the ranges required by the claim.

Thus, applying the standards provided in the MPEP and the case law, Diamond does not anticipate claim 1. As a result, the 35 U.S.C. §102 rejection based on Diamond should be reversed as to claim 1.

Claims 2-12 also are not anticipated for the reasons given above.

## **II. Claim 7**

Claim 7 requires that the alloy be in the form of a stamping, wire or sheet. There is absolutely no disclosure in Diamond of a 22k gold stamping, wire or sheet. The rejection of claim 7 based on anticipation must be reversed. Diamond does not say that 22karat gold can be made into a stamping wire or sheet.

## **OBVIOUSNESS**

### **I. Claims 1-12**

As an after thought and without proper analysis, the Examiner rejects all claims as obvious.

A claimed invention cannot be found obvious unless something in the prior art suggests the invention to a person of ordinary skill in the art. *Ex parte Clapp*, 227 U.S.P.Q. 972, 973 (Bd. App. 1985). The Examiner is required in the first instance to provide a factual (not speculative) basis for an obviousness rejection. As the Court in *In re Warner*, 154 U.S.P.Q. 173, 179 (C.C.P.A. 1967) explained:

A rejection based on section 103 clearly must rest on a factual basis, and these facts must be interpreted without hindsight reconstruction of the invention from the prior art. In making this evaluation, all facts must be considered. The Patent Office has the initial duty of supplying the factual basis for its rejection. It may not, because it may doubt that the invention is patentable, resort to speculation, unfounded assumptions or hindsight reconstruction to supply deficiencies in its factual basis.

For the reasons given above, claim 1 is not anticipated. The invention presents a very specific finding about 22k gold. As detailed in the specification, the inventor has realized that it is possible to make a 22 karat gold alloy that has sufficient hardness for jewelry applications without sacrificing desirable color characteristics. Traditional 22-karat gold jewelry must be relatively thick due to its softness. Substances that harden 22 karat gold may impart undesirable color. The invention permits the use of standard machine fabrication techniques with 22 karat gold material, such as stamping, wire drawing and threading, while maintaining desirable color. Note that the rationale behind the invention and the claims are specific to 22-karat jewelry.

Even if an alloy within the scope of claim 1 were theoretically within the broad scope disclosed in Diamond, nothing in the cited art provides any motivation or suggestion to produce such an alloy. Certainly nothing in Diamond hints at the Applicant's discovery of a solution to the problem of how to make 22 karat gold harder and feasible in machine fabrication techniques without undesirable discoloration. Indeed, Diamond has nothing at all to say that specifically addresses 22 karat gold. Not one of Diamond's examples is 22 karat gold. The highest gold content is in Example 1 (14 karat) and Example 19 (18 karat). Each of claims 1-~~5~~<sup>4</sup> is limited to a specific gold content: 10k, 18k, 14k, 8k. The characteristics of 14 karat (58.33%) gold, 18 karat (75%) gold and other lower gold content alloys, are completely different from 22 karat gold, which is 91.6% gold.

The Examiner focuses on the first sentence of Diamond's Summary of the Invention (2:13-19), which says, "the invention contemplates the provision of improved yellow gold karat metal alloys ranging from 8 karat to 22 karat..." Claim ~~5~~<sup>8</sup> features alloys that range from 33.3 to 92 parts gold. So there is absolutely no teaching in Diamond whatsoever that specifically addresses 22 karat gold alloys. Diamond simply makes two broad statements of ranges that are broad enough to include 22 karat gold.

Even after the Examiner arbitrarily selects 22 karat gold from a reference that focuses on lower gold content alloys, he has not achieved the invention. From the table provided above at page 5, it is clear that one skilled in the art would have to make additional selections from the disclosure in Diamond to arrive at an alloy within the limits of claim 1. One would have to select a value toward the bottom of Diamond's copper range, and one would have to select the bottom of Diamond's silver range. So the examiner has made not one but three specific selections, picking and choosing from the general description of weight ranges in Diamond to create an alloy that falls within the claims.

Legally, the Examiner must address this issue. The Examiner's reliance on the fact that one of Diamond's claims has sufficient breadth to encompass the claimed compositions is not adequate to support an obviousness rejection. Why would one make the selections necessary to fall within the claimed ranges? The art doesn't say. The obviousness rejection must be withdrawn.

For all of the above reasons, the 35 U.S.C. §103(a) rejection of claims 1-12 should be reversed.

## II. Claim 7

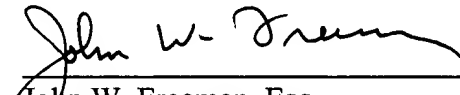
As noted, claim 7 specifically features constructions that are not generally possible with soft gold such as 22 karat gold. There is no hint in Diamond that one could make these constructions. As noted, Diamond does not include teachings that are specific for 22 karat gold at all.

Claim 7 is patentable and the obviousness rejection must be reversed for the above additional reason.

The brief fee of \$330 is enclosed. Please apply any other charges (including extension fees)<sup>1</sup> or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: 7/7/04

  
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<sup>1</sup> A petition to revive this application was granted on June 9, 2004, and the period for filing this appeal brief was set to run from June 9, 2004. Accordingly this brief is timely and no extension fee is required.



### **Appendix of Claims**

1. A 22K gold alloy comprising, by weight:  
silver: 2–6%  
cobalt: 0.1 to 2%  
optionally boron up to 0.5%  
copper: 0.33% - 8.40%.
2. The composition of claim 1 in which the silver content is 2-5%, by weight.
3. The composition of claim 1 in which the cobalt content is 0.1–1%, by weight.
4. The composition of claim 2 in which the cobalt content is 0.1–1%, by weight.
5. A master alloy for combining with gold, comprising, by weight:  
silver: 32 –96%  
cobalt: 1.6-32.00%  
optionally boron up to 8%  
copper: 5.28 – 66.40%.
6. A method of making a 22K gold alloy comprising combining gold with the master alloy of claim 5.
7. The alloy of claim 1 in the form of a jewelry casting, a stamping, a wire or a sheet.
8. The alloy of claim 1 fabricated into a decorative article.
9. The master alloy of claim 5 for combining with gold to produce a 22k alloy.
10. The alloy of claim 5 in which the silver content is 32-80%, by weight.

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11. The alloy of claim 5 in which cobalt is 1.6-16.00%, by weight.
12. The alloy of claim 10 in which cobalt is 1.6-16.00%, by weight.